Data Analysis Notebook

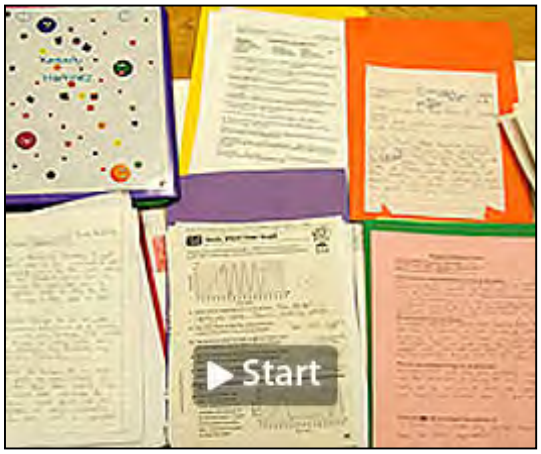
Mini-Lesson

30 minutes

Materials Needed	Chart paper, marker, sticky notes, paper, pencils, Data Analysis Notebook handout (1 per participant) Video: Go Back and Reflect http://opi.mt.gov/Streamer/Instructional_Innovations/video.php?content=419		
Step	*Description*	*Time*	*Target Audience (All, Educational Leaders, Teachers)*
Introduce/Ask	Introduce the Data Analysis Notebook by asking teachers to reflect on their current practice with students regarding data analysis. Use Think-Pair-Share to ask and reflect on the following questions: How do your students determine what they need help with and how they improve the assessment (weekly, monthly, yearly) outcomes (scores)?	2-3 min.	All
Video: Go Back and Reflect	Before viewing the video, *Go Back and Reflect,* have participants make a "T-Chart" on a piece of paper or sticky note. Label one side "challenges" and label the other side "benefits". Tell participants to record challenges and benefits of implementing data analysis notebooks while viewing the video as the group will be sharing out these after viewing the *Go Back and Reflect* media clip.	5 min.	All
Discuss	After the video ask participants to share with the group both the challenges and the benefits for implementing data analysis notebooks.	3 min.	All
Review Handout: Data Analysis Notebook	Distribute the Data Analysis Notebook handout and allow participants time to review the six steps in using the Data Analysis Notebook and the two examples of test questions and the two examples of student data analysis notebook entries.	4 min.	All
Discuss/Plan	Depending on group size participants	10 min.	All

	can discuss whole group or in small groups how to implement the use of the Data Analysis Notebook and set plans of action for implementation and timeline that could include creation, use, and analysis by teachers.		
Write it down!	Write down the action plan along with any timeline and role responsibilities. Remember to follow up to reflect on the use of the Data Analysis Notebook; consider getting responses from students over time.	5 min.	All

Data Analysis Notebook



The Data Analysis Notebooks are a tool to help teachers assist students in tracking their progress as they go throughout the year, taking benchmark exams and other standardized exams, to help the students determine what they need help with and how they can improve not only their scores, but their logic behind their decision making when they chose certain answers.

Steps in Using Data Analysis Notebooks

1. Students start by looking at what answers they got right and what answers they got wrong.

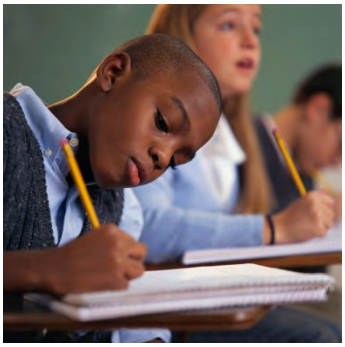
2. Students write down the question they got wrong, write down the answer choices that were available to them, and write down the answer that they chose.

3. Students are expected to write down why they chose the answer they chose; what the rationale was.

4. Students then write down why they missed the answers, which is the most valuable piece because they are becoming cognizant of why they are making the mistakes they are making.

5. If time allows, have students write down how they are going to improve on the next exam.

6. The data analysis notebooks allow students and teachers to see exactly what areas students are struggling with. When students, with the teacher's guidance, go back and look at their exam they begin to make statements like, "Oh I missed questions two, five, and seven; those were all mood and tone questions." They will put that information in their Data Analysis Notebooks, which will give them a better understanding of the fact that maybe they are deficient in that area. Teacher's will also know this information and will be able to better support individual needs of students.



Math Test Example

#13: The county fair has an exhibit of farm animals. The chart below shows the number of animals in the exhibit.

Animals in the Exhibit

Animal	Number in the Exhibit
Sheep	25
Cow	40
Horse	15
Goat	70

Sandy is making a graph to show the distribution of animals in the exhibit. Which type of graph is the **most** appropriate to use to display these data?
A: circle B: line C: stem and leaf D: histogram

Student Answer: B
Correct Answer: D

Student Data Analysis Notebook Example

#13- Sandy is making a graph to show the distribution of animals in the exhibit. Which type of graph is the **most** appropriate to use to display these data?
A: circle B: line C: stem and leaf D: histogram

I chose line graph because that is the one I am most familiar with. I thought it might have been circle, but I wasn't sure because then you would have to figure percentages. I have no clue what C even is.

After reviewing with my teacher, I now remember that a histogram is really just a bar graph, which would make sense for this question. I also think a circle graph would work, but I don't think they are asking for me to figure percentages. I know I need to study about the differences between different graphs.

Science Test Example

#22: What happens when a liquid is heated?
A: Its particles get larger, taking up more space.
B: Its particles get smaller and move faster, taking up more space.
C: Its particles get larger and move faster, taking up more space.
D. Its particles remain the same size but move faster, taking up more space.

Student Answer: A
Correct Answer: C

Student Data Analysis Notebook Example

#22: What happens when a liquid is heated?
A: Its particles get larger, taking up more space.
B: Its particles get smaller and move faster, taking up more space.
C: Its particles get larger and move faster, taking up more space.
D. Its particles remain the same size but move faster, taking up more space.
I chose A, because I know that particles get larger and that they take up more space when liquid is being heated. After reviewing with my teacher and the text, I now know that they also move faster, so C is the correct answer.